

Docket No. AUS920030680US1

CLAIMS:

What is claimed is:

1. A method in a data processing system for managing interrupts using a set of interrupt servers associated with presentation controllers, the method comprising:
 - responsive to receiving an interrupt signal,
 - identifying a first interrupt server in the set of interrupt servers to handle the interrupt, wherein the set of interrupt servers are linked in a circular list using a set of identifiers; and
 - sending the interrupt to a second interrupt server potentially associated with a second presentation controller in the set of presentation controllers based on an identifier identifying the second interrupt server and its presentation controller in the set of presentation controllers if the first interrupt server is unable to handle the interrupt, wherein the identifier is found within the first presentation controller, wherein the interrupt is passed to different interrupt servers potentially associated with different presentation controllers within the circular list.
2. The method of claim 1, wherein the found set of identifiers are found in a set of interrupt management areas associated with the set of interrupt servers managed by the presentation controllers.

Docket No. AUS920030680US1

3. The method of claim 1, wherein the first interrupt server associated with a first presentation controller is unable to handle the interrupt if the interrupt has a priority that is less than the current priority of the first interrupt server associated with the first presentation controller.

4. The method of claim 1, wherein the interrupt signal is received by an interrupt source controller.

5. The method of claim 1, wherein the data processing system includes a second set of interrupt servers, potentially associated with a second set of presentation controllers, wherein the second set of interrupt servers, potentially associated with a second set of presentation controllers are linked in a circular list using a second set of identifiers.

6. The method of claim 1, wherein the interrupt signal is received from an adapter in the data processing system.

7. The method of claim 4, wherein the signal is associated with a priority and an interrupt source number identifying the first interrupt server associated with the first interrupt presentation controller.

8. The method of claim 7 further comprising:
changing the interrupt source number to identify a different interrupt server, potentially associated with a

Docket No. AUS920030680US1

different interrupt presentation controller within the circular list after identifying the first presentation controller.

9. The method of claim 2, wherein the identifier is located in a register in the interrupt management area of the first interrupt server located in the first presentation controller.

10. A data processing system comprising:

- an interconnect fabric;

- a set of processors;

- an interrupt source controller connected to the interconnect fabric; and

- a set of interrupt presentation controllers connected to the interconnect fabric, wherein the set of interrupt presentation controllers are logically linked in a loop, wherein each interrupt management area contained in a presentation controller in the set of presentation controllers includes a pointer to another interrupt management area, potentially located in another presentation controller in the set of presentation controllers and wherein an interrupt server located in a presentation controller receiving an interrupt sends the interrupt to the interrupt management area of another interrupt server located, in potentially another presentation controller using a pointer if the interrupt server associated with the presentation controller is unable to process the interrupt.

Docket No. AUS920030680US1

11. The data processing system of claim 10, wherein the presentation controller is unable to handle the interrupt if a priority of the interrupt is less than a priority of the presentation controller.

12. The data processing system of claim 10, wherein the interconnect fabric is a bus.

13. A data processing system for managing interrupts using a set of presentation controllers, the data processing system comprising:

- a bus system;
- a communications unit connected to the bus system;
- a memory connected to the bus system, wherein the memory includes a set of instructions; and
- a processing unit connected to the bus system,

wherein the processing unit executes the set of instructions to identify a first interrupt server associated with a presentation controller in the set of presentation controllers to handle the interrupt in which the set of interrupt servers and their presentation controllers are linked in a circular list using a set of identifiers found in the interrupt management area of the interrupt servers of the set of presentation controllers in response to receiving an interrupt signal; and send the interrupt to a second interrupt server, potentially associated with a second presentation controller in the set of presentation controllers based on an identifier identifying the interrupt server, potentially in a second presentation controller in the set of presentation

Docket No. AUS920030680US1

controllers if the first interrupt server is unable to handle the interrupt in which the identifier is found.

14. A data processing system for managing interrupts using a set of interrupt servers associated with presentation controllers, the data processing system comprising:

identifying means, responsive to receiving an interrupt signal, for identifying a first interrupt server in the set of interrupt servers to handle the interrupt, wherein the set of interrupt servers are linked in a circular list using a set of identifiers; and

sending means for sending the interrupt to a second interrupt server potentially associated with a second presentation controller in the set of presentation controllers based on an identifier identifying the second interrupt server and its presentation controller in the set of presentation controllers if the first interrupt server is unable to handle the interrupt, wherein the identifier is found within the first presentation controller, wherein the interrupt is passed to different interrupt servers potentially associated with different presentation controllers within the circular list.

15. The data processing system of claim 14, wherein the found set of identifiers are found in a set of interrupt management area associated with the set of interrupt servers managed by the presentation controllers.

Docket No. AUS920030680US1

16. The data processing system of claim 14, wherein the first interrupt server associated with a first presentation controller is unable to handle the interrupt if the interrupt has a priority that is less than the current priority of the first interrupt server associated with the first presentation controller.

17. The data processing system of claim 14, wherein the interrupt signal is received by an interrupt source controller.

18. The data processing system of claim 14, wherein the data processing system includes a second set of interrupt servers, potentially associated with a second set of presentation controllers, wherein the second set of interrupt servers, potentially associated with a second set of presentation controllers are linked in a circular list using a second set of identifiers.

19. The data processing system of claim 14, wherein the interrupt signal is received from an adapter in the data processing system.

20. The data processing system of claim 17, wherein the signal is associated with a priority and an interrupt source number identifying the first interrupt server associated with the first interrupt presentation controller.

Docket No. AUS920030680US1

21. The data processing system of claim 20 further comprising:

changing means for changing the interrupt source number to identify a different interrupt server, potentially associated with a different interrupt presentation controller within the circular list after identifying the first presentation controller.

22. A computer program product in a computer readable medium for managing interrupts using a set of interrupt servers associated with presentation controllers, the computer program product comprising:

first instructions, responsive to receiving an interrupt signal, for identifying a first interrupt server in the set of interrupt servers to handle the interrupt, wherein the set of interrupt servers are linked in a circular list using a set of identifiers; and

second instructions for sending the interrupt to a second interrupt server potentially associated with a second presentation controller in the set of presentation controllers based on an identifier identifying the second interrupt server and its presentation controller in the set of presentation controllers if the first interrupt server is unable to handle the interrupt, wherein the identifier is found within the first presentation controller, wherein the interrupt is passed to different interrupt servers potentially associated with different presentation controllers within the circular list.

Docket No. AUS920030680US1

23. The computer program product of claim 22, wherein the found set of identifiers are found in a set of interrupt management areas associated with the set of interrupt servers managed by the presentation controllers

24. The computer program product of claim 22, wherein the first interrupt server associated with a first presentation controller is unable to handle the interrupt if the interrupt has a priority that is less than the current priority of the first interrupt server associated with the first presentation controller.

25. The computer program product of claim 22, wherein the interrupt signal is received by an interrupt source controller.